

**REMARKS**

The Office Action indicates that the title of the invention is not descriptive. The title of the invention has been amended accordingly.

Claims 1-3 and 13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Katakura (U.S. Patent No. 5,475,274). Claims 12 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Katakura in view of common knowledge in the art.

It is respectfully submitted, however, that the claims, as amended, are patentable over the art of record for the reasons set forth below.

Katakura discloses a driving motor adapted to prevent vibration of the motor caused by magnetic imbalance (See column 2, lines 13-16). In an exemplary mounting method, Katakura discloses inserting a machine screw 15 into a through hole 14 formed in stator core 4, thereby improving the mechanical connection of the stator core 4 and second mounting section 10 (See column 4, lines 59-67; column 5, line 66 through column 6, line 3; and Figures 2-5).

Applicants' invention, as recited by claim 1, includes a feature which is neither disclosed nor suggested by the art of record, namely:

... a metal terminal disposed radially, by insert molding, around said bearing supporter substantially parallel to a bottom face of said base section.

This means that the motor recited in claim 1 includes a motor base 31. Motor base 31 includes a base section 31c and a bearing supporter 31d for supporting a bearing vertically with respect to the base section 31c. The motor base 31 also includes a metal terminal 31a radially disposed around bearing supporter 31d. Metal terminal 31a is disposed by insert molding. Metal terminal 31a is substantially parallel to a bottom face of the base section 31c. This feature is found in the originally filed application at page 6, line 23 through page 7, line 3 and in Figures 2c, 3a, and 3b. No new matter has been added.

For example, Figures 2c, 3a, and 3b provide illustrations of exemplary embodiments of the claimed invention. Figure 2c and Figure 3b shows six metal terminals 31a radially formed by insert molding around bearing supporter 31d. As is made particularly clear in Figure 3b, terminals 31a are formed substantially parallel to a bottom face of the Section 31c.

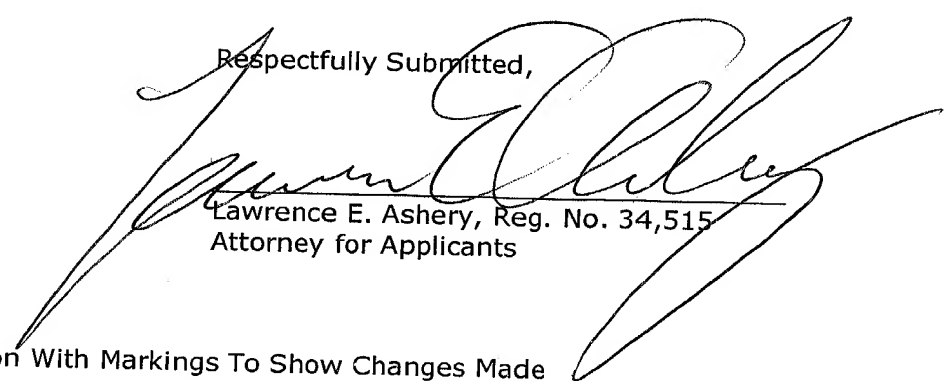
In contrast, machine screw 15 is not disposed radially, by insert molding, around bearing supporter 13. Further, machine screw 15 is not disposed substantially parallel to a bottom face of motor base 8.

It is because Applicants include the feature of a metal terminal disposed radially, by insert molding, around the bearing supporter, substantially parallel to a bottom face of the base section, that the following advantages are achieved. Rigid retaining of the bearing supporter 31d is achieved because base section 31c is reinforced by the metal terminal 31a. Additionally, the impact resistance of the rotor may be increased by soldering a portion of terminal 31a that protrudes from the bottom face of the base section 31c to the board of the apparatus. As a result, an apparatus with improved rigidity is provided and the bearing supporter 31d is firmly supported. Thus, a lightweight motor with improved impact-resistance is provided, while maintaining a small and thin profile.

Accordingly, for the reasons set forth above, claim 1 is patentable over the art of record. Claims 2-3 include all of the features of claim 1 from which they depend. Thus, claims 2-3 are also patentable over the art of record for the reasons set forth above. Claims 12-13 and 19, while not identical to claim 1, include features similar to those recited above with respect to claim 1. Accordingly, claims 12-13 and 19 are also patentable over the art of record for the reasons set forth above.

In view of the foregoing amendments and arguments set forth above, the above-identified application is in condition for allowance which action is respectfully requested.

Respectfully Submitted,

  
Lawrence E. Ashery, Reg. No. 34,515  
Attorney for Applicants

CMS/fp/mjc

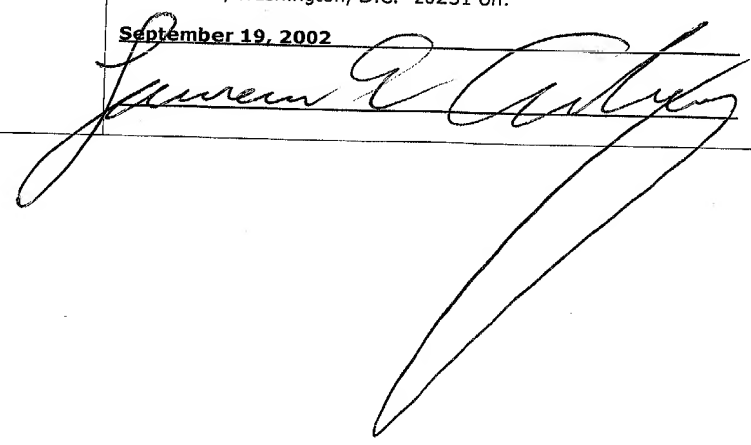
Enclosures: Version With Markings To Show Changes Made

Dated: September 19, 2002

P.O. Box 980  
Valley Forge, PA 19482-0980  
(610) 407-0700

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE TITLE:**

SMALL AND FLAT MOTOR, ~~AND APPARATUS USING THE SAME~~  
~~MOTOR~~ VIBRATIONAL MOTOR HAVING IMPACT-RESISTANT STRUCTURE

**IN THE CLAIMS:**

1           1.       (Amended) A motor comprising:  
2                   a rotor;  
3                   a stator assembly facing said rotor; and  
4                   a motor base including;  
5                   a base section;  
6                   a bearing supporter for supporting a bearing vertically with  
7       respect to said base section;  
8                   a stator supporter, substantially concentric with said bearing  
9       supporter, for being mounted with said stator assembly, and;  
10                  a metal terminal disposed radially, by insert molding, around said  
11       bearing supporter ~~and exposed from~~ substantially parallel to a bottom face of said  
12       base section.

1           12.       (Amended) A motor comprising:  
2                   a rotor;  
3                   a stator assembly facing said rotor;  
4                   a motor base for mounting said stator assembly; and  
5                   a mounting terminal disposed radially, by insert molding, on a  
6       bottom face of said motor base,  
7                   wherein a unit area mass, derived from dividing a self weight of said  
8       motor by a total area of said mounting terminals, is not more than  $0.1\text{g/mm}^2$ .

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1           13.    (Amended) An apparatus comprising:  
2                   a motor;  
3                   a board on which said motor is mounted; and  
4                   a driver for driving said motor,  
5           ~~wherein said motor including:~~  
6                   a rotor;  
7                   a stator assembly facing said rotor; and  
8                   a motor base including;  
9                   a base section;  
10                  a bearing supporter for supporting a bearing vertically with  
11   respect to said base section;  
12                  a stator supporter, substantially concentric with said bearing  
13   supporter, for being mounted with said stator assembly, and  
14                  a metal terminal disposed radially, by insert molding, around  
15   said bearing supporter ~~and exposed from~~ substantially parallel to a bottom face of  
16   said base section.

1           19.    (Amended) An apparatus comprising:  
2                   a motor;  
3                   a board on which said motor is mounted; and  
4                   a driver for driving said motor,  
5           ~~wherein said motor including:~~  
6                   a rotor;  
7                   a stator assembly facing said rotor;  
8                   a motor base for mounting said stator assembly; and  
9                   a mounting terminal disposed radially, by insert molding, on a  
10   bottom face of said motor base,

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- 11                    wherein a unit area mass, derived from dividing a self weight of said  
12    motor by a total area of said mounting terminals, is not more than  $0.1\text{g/mm}^2$ .